```
 /* Structure for communication between the Ramper function and the
*           power supply control pv's.
* /

#ifndef  _PSCStructH
#define  _PSCStructH

#ifndef  __INCvxWorksh
#include  <vxWorks.h>
#endif

typedef  struct  psc_ramp  {
            double      *pcurvals;
            double      *pnewvals;
            struct  dbAddr
                        *ppsc_pv,                   /* PV output to DAC * /
                        *preq_pv;                   /* Set point (request) PV * /
            BOOL        alive;
            BOOL        changed;
            BOOL        init;
            BOOL        switch_on;                  /* Is switch set to On? * /
            BOOL        transition;                 /* Has On /Off switch changed to On? * /
            BOOL        send_zeroes;                /* Tells ramper to zero set & DAC out * /
            BOOL        got_zero;                   /* Has req been 0.0 since last switch? * /
            BOOL        sent_warning;               /* (See note below.) * /
            double      output_max;
            double      output_min;
            double      smallest_change;
            double      loop_time;                  /* Update rate (T) * /
            double      ramp_rate_limit;
            double      time_const;                 /* (tau) * /
            double      ramp_rate;                  /* (R) * /
            double      filt_coef_a;                /* A = (2*tau – T) /(2*tau + T) * /
            double      filt_coef_b;                /* B = T /(2*tau + T) * /
            double      max_step_size;              /* R*T * /
            double      limited_setpt;              /* requested (y1) * /
            double      filter_output;              /* y2 * /
            double      prev_lim_setpt;
            double      prev_flt_out;
            double      new_time_const;
            double      new_ramp_rate;
            double      new_filt_coef_a;
            double      new_filt_coef_b;
            double      new_max_step;
            double      new_limited_set;
}  PSC_RAMP;
#define  NUM_NEWVALS          6

#endif

 /* The first time the power supply control software sees a non–zero value set
*           while the power supply is switched off, it will send a warning message
*           of the following form:
*                       "WARNING – nonzero <record_name> while PS switched off."
*           The software permits such settings (for ramper tests).
*           During normal operation, however, current is ramped to zero before
*           power off and not ramped up again until power is on and the power
*           supply is ready.
* /
```